



August 11, 2021

Via Email/Sharefile

Mr. Sam Abdellatif
Land and Redevelopment Programs Branch
US Environmental Protection Agency Region 2
290 Broadway, 25th Floor
New York, New York 10007-1866

**Re: Well Manual Response to Comments (April 26, 2021 Comments)
Hess Corporation Former Port Reading Complex (HC-PR)
750 Cliff Road
Woodbridge, Middlesex County, New Jersey
NJDEP PI# 006148
ISRA Case No. E20130449
EPA ID No. NJD045445483**

Dear Mr. Abdellatif:

Earth Systems, Inc. (Earth Systems) has prepared this letter on behalf of Hess Corporation (Hess) regarding the comments provided by the New Jersey Department of Environmental Protection (NJDEP) on April 26, 2021 relating to the Well Manual Response to Comments submitted on January 7, 2020. A revised Well Construction Summary Table (WCST) has been included with this response. The WCST and Manual will continue to be revised and updated, as necessary.

NJDEP Comments & Earth Systems/Hess Responses

NJDEP Comment 1: Response 1 is accepted. Please ensure that the updated well location figure is included with all field sampling staff copies of the well manual.

Earth Systems/Hess Response 1: The updated well location figure will continue to be included with all field sampling staff copies.

NJDEP Comment 4: Response 4 is accepted. Note: The 2019 TD-TOC data was very different from some of the November 5, 2020 TD-TOC data. There can be significant variations in measurements.

Earth Systems/Hess Response 4: Noted. Monitoring wells will continue to be gauged and redeveloped, if necessary.

NJDEP Comment 5: Response 5: The response notes that pump placement has always considered well construction and depth to water and has been identified on field sampling data sheets. A primary intent of the WCST is to ensure that the screen intervals from TOC identified on the field sampling data sheets are accurate. Based on prior data sheets, this information is unclear. A description of the summary table with future reports that identifies and describes well construction, gauged depth to groundwater (TOC) and pump intake depth (TOC) should be included.

Earth Systems/Hess Response 5: Field sampling data sheets will continue to be included with future reports and will document pump placement depth, depth to water, and well construction details.

NJDEP Comment 9: Response Comment 9: Well evaluations by a licensed driller after the November 5, 2020 gauging event were completed to determine redevelopment, reinstallation, abandonment, and any well use limitations. TL-1 is listed under Truck Loading Rack wells although it is not a Truck Loading Rack well. Please confirm the correct well.

Earth Systems/Hess Response 9: The correct well that was redeveloped after the November 5, 2020 gauging event was monitoring well TL-1 (Marine Terminal Area), which is correctly labeled in the WCST.

NJDEP Comment 10: The following data entry corrections are needed.

Earth Systems/Hess Response 10: Earth Systems/Hess has updated the WCST to reflect the data entry changes for the following wells: AB-2R, AB-4D, AB-5, AD-1, SP-1, LN-4, LN-6, LN-7, LS-2, PER-2, PER-4, PER-6R, PER-8, PER-9D, PER-9DD, PL-1R, PL-3, PL-4, PL-6RR, PL-8, SPS-3 through SPS-6, SP-6, SP-7, TC-1, TC-2, TC-3, TM-1, TM-2, TM-6, TM-7, TR-1 through TR-4, TR-3R, MW-1 (2600007560), MW-2 (2600007561 and 2600072692), OBS-1, OBS-2, and OBS-4.

NJDEP Comment 10: Construction Questions for the following wells:

LN-1: This well screen interval (6-16' bgs, 8-18' TOC) was based on the 10' screen, casing AGS measurements, and the May 2019 gauged TD was 17.35' TOC. The November 2020 gauged TD was 13.73, and redeveloped TD was 14.85' TOC. The open screen interval from TOC conservatively estimated to be 8-14.85' TOC.

- LN-1 has been corrected in the WCST to the more conservative screen interval of 8.0-14.85' TOC.

PER-2DD: Well construction information was set based on 2019 gauged TD TOC

(63.01'). Driller evaluated November 2020. November 5, 20202 gauged TD was 65.5' TOC, and November 19, 2020 gauged TD was 63.3'TOC. Which is the depth to go with?

- Based on the latest well driller redevelopment, the 63.3' depth from TOC will be used as the TD.

PL-7: Recent damage to well prevents confirmation of well construction. This information in the WCST reflects well record, but total depth TOC in prior gauging was deeper than expected. Further assessment pending review.

- Due to the damage at PL-7, this well will be re-evaluated to determine if it can be repaired or has to be redrilled.

TM-4: November 2020 TD TOC of 18.5' I very different from prior TD TOC (15.01'). Well depth TOC is 15' based on well record. Resolve TD and well construction.

- The total depth of TM-4 from TOC is 15.01 feet. The total depth documented in the November 2020 summary table of 18.5' was a misprint and has been corrected in the WCST.

PER-7: Based on boring TD and November 2020 well TD TOC (17.93'), the shallower boring labeled PER-7 appears to go with the PER-8 well. Based on the PER-8 boring log PID levels at 9-11' bgs, this should be a PER-7 targeted low flow sampling interval.

- During the annual groundwater sampling event the pump will be placed at the 9-11 foot depth interval during the low-flow sampling of PER-7.

NJDEP Comment 10: Construction Questions on the SC wells.

Earth Systems/Hess Response 8: The summary table has been updated to reflect the information that was emailed to the NJDEP on April 21, 2021. The following table summarizes the correct construction details.

| Well ID | TOC Elevation (ft) | Ground Elevation (ft) | Diameter (in) | Screen Length (ft) | Screen Interval (TOC, ft) Based off of Latest Gauging (1/20/2021) | Stick-Up Height (TOC - Ground Elev., ft) | Casing Length (ft) | Depth of Well (TOC, ft) | Gauged DTB from TOC (1/20/2021) |
|---------|--------------------|-----------------------|---------------|--------------------|---|--|--------------------|-------------------------|---------------------------------|
| SC-1 | 4.74 | 5.13 | 2 | 10 | 5.5-15.5* | Flush Mount | 5.5 | 15.5* | 15.24 |
| SC-1D | 4.95 | 5.03 | 2 | 10 | 23-33* | Flush Mount | 23 | 33* | 33.00 |
| SC-1DD | 5.07 | 5.08 | 2 | 10 | 50-60 | Flush Mount | 50 | 60 | 59.15 |
| SC-2 | 4.89 | 5.07 | 2 | 10 | 5.5-15.5* | Flush Mount | 5.5 | 15.5* | 15.40 |
| SC-2D | 4.68 | 4.77 | 2 | 10 | 25-35 | Flush Mount | 25 | 35 | 35.00 |
| SC-2DD | 4.69 | 4.79 | 2 | 10 | 51-61* | Flush Mount | 51 | 61* | 60.90 |
| SC-2DDD | 4.54 | 4.65 | 2 | 10 | 68-78 | Flush Mount | 68 | 78 | 77.20 |
| SC-3 | 7.03 | 4.08 | 4 | 10 | 7.75-17.75* | 2.95 | 7.75 | 17.75* | 17.54 |
| SC-3D | 6.42 | 3.84 | 2 | 10 | 28-38 | 2.58 | 28 | 38 | 37.90 |
| SC-3DD | 6.74 | 3.8 | 2 | 10 | 58-68 | 2.94 | 58 | 68 | 68.10 |
| SC-3DDD | 6.84 | 3.89 | 2 | 10 | 74-84 | 2.95 | 74 | 84 | 84.05 |
| SC-4 | 7.11 | 7.28 | 2 | 10 | 5.5-15.5* | Flush Mount | 5.5 | 15.5* | 15.23 |
| SC-4D | 7.08 | 7.28 | 2 | 10 | 25-35 | Flush Mount | 25 | 35 | 34.70 |
| SC-4DD | 6.92 | 7.11 | 2 | 10 | 50-60 | Flush Mount | 50 | 60 | 59.92 |

Should you have any questions or require additional clarification or information, please contact me at 732-739-6444 or via e-mail at ablake@earthsys.net. If you have any questions relating to the project and schedule moving forward, you can also contact Mr. John Schenkewitz of Hess Corporation at 609-406-3969.

Sincerely,



Amy Blake
Sr. Project Manager

- c. Ms. Julia Galayda, NJDEP Case Manager (via email/Sharefile)
Mr. John Schenkewitz – Hess Corporation (via e-mail)
Mr. Rick Ofsanko – Earth Systems (via e-mail)
Mr. John Virgie – Earth Systems (via e-mail)